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# SHINOBI

**Gaia404 / 408 / 416-60 / 416-120**

## Chassis Assembly Guide

Version 1.0

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- (2) This device must accept any interference received, including interference that may cause undesired operation.

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"Perchlorate Material-special handling may apply, see

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## ***I. Introduction***

Thank you for purchasing huperLab **Gaia404 / Gaia408 / Gaia416** motherboard, a reliable motherboard produced under huperLab's consistently stringent quality control. It delivers excellent performance with robust design conforming to huperLab's commitment to quality and endurance.

This is an illustrated guide describes in details to instruct you assemble your own computer. Part 1 contain configuration of the Chassis and step-by-step guide to the hardware removal. Part 2 contain the configuration of the motherboard and step-by-step assembly guide to the system installation.

### ***Pre-removal / installation Precautions***

Pay attention to the following precautions before you install motherboard components or change any motherboard settings.

1. Unplug the power cord from the wall socket before touching any component.
2. To avoid damaging the motherboard components due to static electricity, NEVER place your motherboard directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle components.
3. Hold components by the edges and do not touch the ICs.
4. Whenever you uninstall any component, place it on a grounded antistatic pad or in the bag that comes with the component.
5. The motherboard and chassis accessories contain sensitive components. Therefore, make sure to store unused items in a dust-free and anti static environment to lower the chance of electro-magnetic interference between them. Dust can affect the performance of the system.

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## I.1 Package Contents

### Motherboard Accessories

4 x Screws (SCREW M3\*5L (F) W-ZN #2)

1 x BNC Card Cable



### Chassis Accessories

20 x Screws

Fan Module

BNC Board

BNC Bracket

HDD Cage

HDD Bracket

SSD Bracket

Cold-swap Bay



(SCREW M3\*12L (P) #2)



(SCREW M3\*5L (F) W-ZN #1)



(SCREW M3\*5L (F) W-ZN #2)



(For Optional SATA Hard Drive)

## I.2 Recommended Tools

Philips head Screwdriver (Or Star Screwdriver)



Flat head Screwdriver



Magnetized Screwdriver (Optional)

Forceps (for pulling out jumpers and screws) (Optional)

## I.3 Recommended Working Environment

In environments with ambient temperatures between 0C and 40C.

A flat surface and enough space to move is available when the system is assembled.

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## II. Part One Removal of Chassis Components

**AURA H304 / AURA H308 / AURA H316-60 / AURA H316-120** Intelligent Hybrid DVR.

### II.1 Chassis Internal View

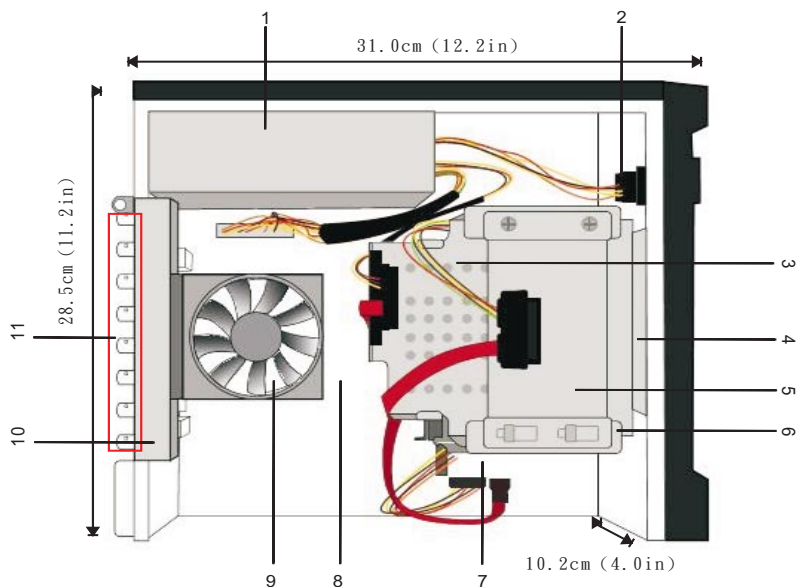


Figure 1. Inside the Chassis

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1. Power Supply
2. A/C Power Device
3. Cold-Swap Bay for SATA Hard Drive
4. Hard-Disk Drive Bracket
5. SSD Bracket
6. Hard-Disk Drive Cage
7. Internal SATA Hard Drive bay
8. System Board
9. System Cooling Fan Module
10. BNC Board with Lightning Protection
11. BNC Ports

---

## II.2 Removal of modules inside Chassis



\* Please make sure to disconnect **power supply** and **peripherals** before removing the system components.

\* Keep all the **screws** in a secure place for later use.

Step 1. Remove the chassis cover. Remove three screws securing the chassis cover to the BNC board.

Front



Back



Figure 2.Chassis Cover Removal

Step 2. Carefully slide the chassis cover back and up with the rear panel facing you. Set aside the chassis cover.



Figure 3. Opened Chassis

---

Step 3. Remove the fan module. Remove one flat screws securing the fan to the BNC board and two screws securing the fan to the cold-swap bay. See Figure 4.

Step 4. Remove the SSD bracket by remove two screws securing the SSD bracket to the HDD cage. Push the bracket away from the securing hocks before lift up the bracket.

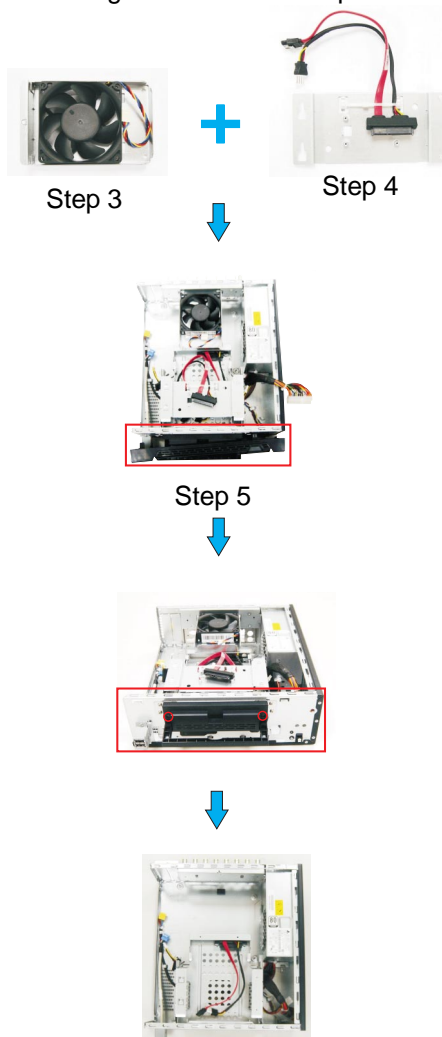


Figure 4. Fan, SSD bracket, HDD bracket removal



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Step 5. Remove the front bezel by disconnect the cover hooks.  
Then, remove two screws securing the HDD bracket to the cold-swap bay. See Figure 4.



- \*Move the **cables** around while removing the components.
- \*Prevent the **cables** from rubbing each other.
- \*This will harm the **cables**.

---

Step 6. Remove the cold-swap bay. Remove seven screws securing the cold-swap bay to the HDD cage. Then, gently push one end of the cold swap bay to the side that is facing out.

**Front**



Figure 5. Cold-Swap Bay Removal

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Step 6. Remove the BNC board. Remove six screws securing the BNC board to the chassis.

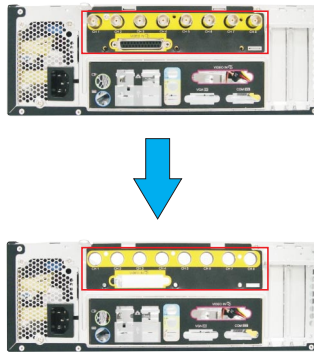


Figure 6. BNC Board Removal

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### III.3 Comparison

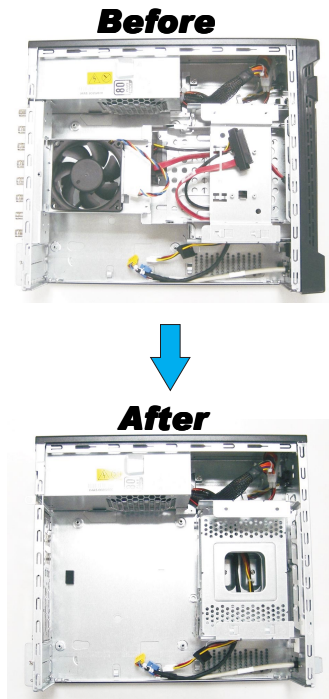


Figure 7. Comparison of before and after

### III. Motherboard Installation

Gaia404 (A330GC-H4) / Gaia408 (A330GC-H8) / Gaia416-60 (A330GC-H16-60) /  
Gaia416-120 (A330GC-H16-120) hyperVision 4000 DSS Server Board.

#### III.1 Motherboard Configuration

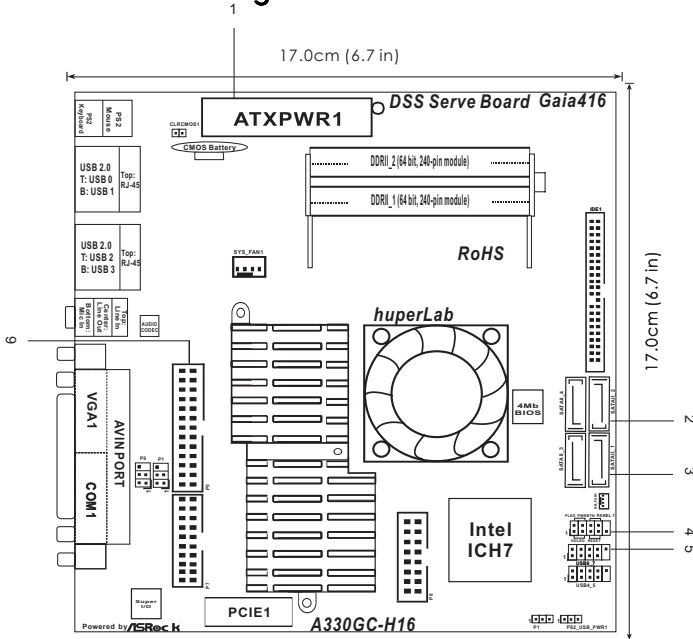


Figure 8. Motherboard Configuration

1. ATX Power Supply
2. SATAII Connector (SATAII\_2; Red)
3. SATAII Connector (SATAII\_1; Red)
4. System Panel Header (PANEL1; Orange)
5. USB 2.0 Header (USB 6\_7; Blue)
6. Video In (P5)

---

## III.2 Motherboard Installation



- \*Place screws into the holes indicated by circles to secure the motherboard to the chassis.
- \*Do not over-tighten the screws! Doing so may damage the chassis and motherboard.
- \*Please make sure to disconnect **power supply** and **peripherals** before removing the system components.
- \* Keep all the **screws** in a secure place for later use.
- \*Do not turn on power during the whole installation process.

Step 1. Place the motherboard on the system board. Firstly, match the mounting holes on the motherboard with the metal spacers H2 & H4. Press four corners gently and fasten four screws to secure the motherboard to the mounting plate.

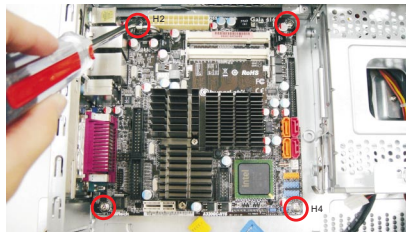


Figure 9. Motherboard Installation

Step 2. Connect the ATX power connector from the ATX power supply to the motherboard.

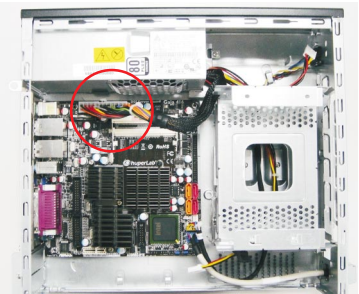


Figure 10. Connect ATX PSU

Step 3. Install the BNC board to the motherboard. Insert the BNC card cable to video in (see P.11 No.6).

**Side**

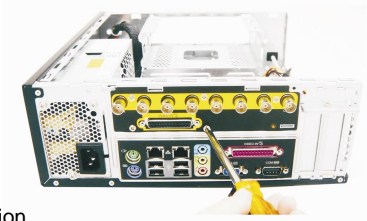
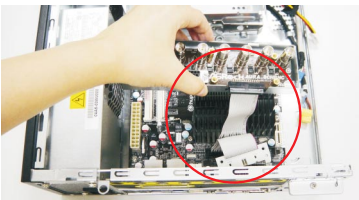
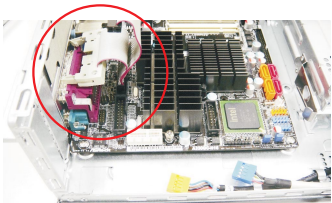


Figure 11. BNC board Installation

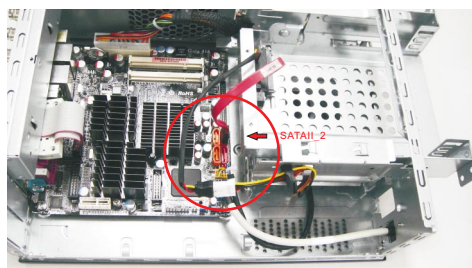
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Step 4. Install the cold-swap bay. Gently push half way of the cold swap bay into the HDD cage. Connect the SATA cable to the **SATA II\_2** connector(see P.11 No. 2) and connect the power connector from the ATX power supply on one side of the HDD cage. See Figure 12.

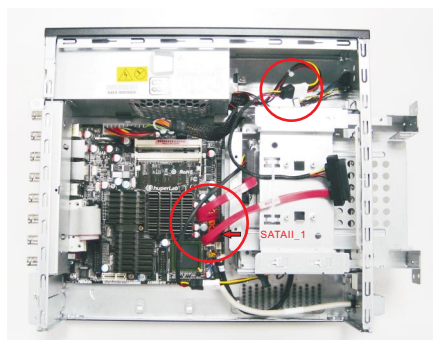
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Step 5. Install the SSD bracket by place the bracket on the top of HDD cage and secure the hooks. Connect the SATA cable to the **SATA II\_1** connector(see P.11 No. 3) and connect the power connector from the ATX power supply on another side of the HDD cage. Now, push the cold-swap bay all the way into the HDD cage. Fasten seven screws to secure the cold-swap and two screws to secure the SSD bracket to the HDD cage. See Figure 12.

---



Step 4



Step 5

Figure 12. Cold-Swap, SSD bracket installation

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## **Hardware Information & Installation:**

- 1.If your system includes the optional internal SSD hard drive, it is suggested to install the machine's operating system on the SSD hard drive and store the video recording data on one or two hard drive.
- 2.If your system does not include the optional internal SSD hard drive and plan to install two hard drives, it is suggested to install the machine's operating system on the internal SATA hard drive and store the video recording data on the cold swap hard drive.
- 3.If your system does not include the optional internal SSD hard drive and only plan to install one SATA hard drive, it is suggested to utilize the cold swap hard drive bay first.

**Cold swap hard drive**



**Internal SATA hard drive**



**SATA Cable**



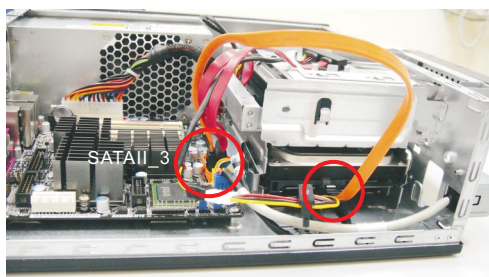
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Step 6. Optional hard drive installation.

Installing cold swap hard drive-- Insert the hard drive to the HDD bracket and fasten two screws on each side to secure the bracket to the cold swap bay.

Installing internal SATA hard drive-- Fasten two screws on two side of the hard drive before insert the hard drive to the HDD cage. The screws will secure the hard drive on the HDD cage. Plug one end of the SATA cable to the hard drive and another end to the **SATAII\_3** connector.

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Step 6

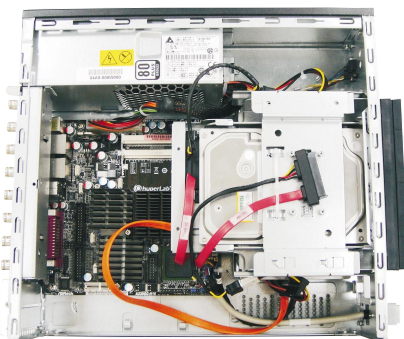


Figure 13. Optional Hard Drive Installation

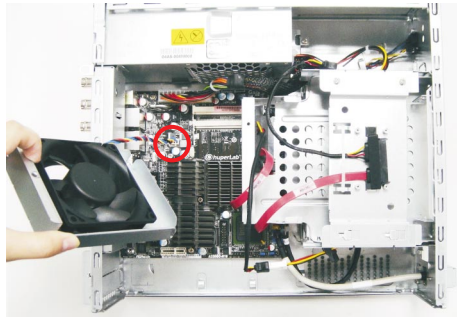


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Step 7. Install the fan module. Connect CPU fan to CPU fan connector and fasten one flat screws to secure the fan module to the BNC board and two screws to the cold-swap bay. See Figure 12.



- \*Move the **cables** around while installing the components.
- \*Prevent the **cables** from rubbing each other.
- \*This will harm the **cables**.



Step 7

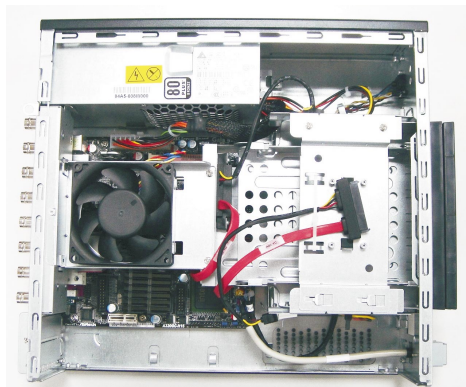


Figure 14. Fan Module Installation

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Step 8. Install the front bezel. Make sure all the hooks clicked.



Figure 15. Front bezel installation

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Step 9. Install the chassis cover. Gently slide the chassis cover toward the front bezel. Fasten three screws to secure the chassis cover to BNC board.

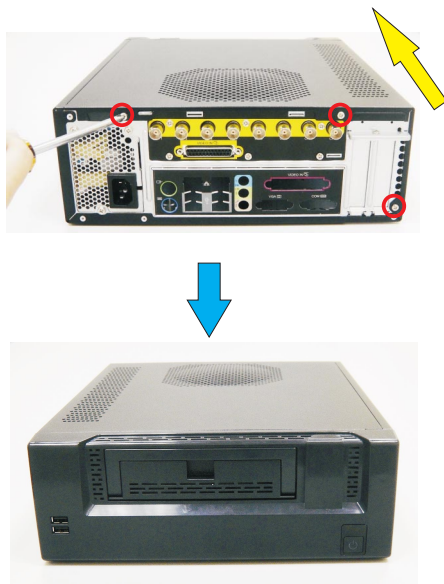


Figure 16. Chassis Cover Installation